

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Declaration for Patent Application

As a named inventor, I hereby declare that:

My residence, mailing address and citizenship are as stated next to my name;

I believe I am the original, first and sole inventor (if only one name is listed) or an original, first and joint inventor (if plural names are listed in the signatory page(s) commencing at page 3 hereof) of the subject matter which is claimed and for which a patent is sought on the invention entitled

	MECHANISI	M TO REDUCE TH	E COST OF FORWARDING POI	NTER A	LIAS	ING	-		
the spe	ecification of which	(check one)					•		
[X]	is attached hereto).							
[]	was filed on	as Ur	nited States Application						
	Number or PCT	International Applica	ation No						
	and was amended	l on	(if applicable).						
includ			d understand the contents of the abo dment referred to above.	ove-ide:	ntified	spec	ificat	ion,	
§1.56, filing capplica	including for continuate of the prior app	nuation-in-part applic	formation which is material to pate cations, material information which onal or PCT international filing dat	became	e avail	able	betwo	een ti	
countr any fo	tent or inventor's cer y other than the Uni reign application fo	rtificate, or 365(a) of ited States of Americ	s under 35 U.S.C. 119(a)-(d) or 36 any PCT international application a, listed below and have also identicertificate, or of any PCT internationity is claimed:	which c ified be	lesigna low, by	ted a	t leas	st one	e box,
		<u>Pr</u>	ior Foreign Application(s)	N	ority ot imed		Cert Copy ES	Filed	l? IO
Numb	per)	(Country)	(Day/Month/Year filed)	[]	[]	[]
Numb	per)	(Country)	(Day/Month/Year filed)	[]	[]	[]
Numb	per)	(Country)	(Day/Month/Year filed)	_ [}	[]	[]
l hereb	by claim the benefit	under 35 U.S.C. §11	9(e) of any United States provision	ıal appli	cation	(s) li	sted l	oelow	<i>1</i> .
(Appli	cation Number)		(Filing Date)						
Annli	cation Number)		(Filing Date)					_	

١

I hereby claim the benefit under 35 U.S.C. 120 of any United States application(s), or 365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. 112, I acknowledge the duty to disclose information known by me to be material to patentability as defined in 37 C.F.R. 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon. Full name of sole or first inventor Jeffrey P. Grossman Inventor's Signature Residence Cambridge, Massachusetts 02141 Citizenship USA	60/299,244		June 19, 2001	Pending
(Application Serial No.) (Filing date) (Status: patented, pending, abandoned) As a named inventor, I hereby appoint the attorneys and/or agents associated with Hamilton, Brook, Smith & Reynolds, P.C., Two Militia Drive, Lexington, Massachusetts 02421-4799 Customer No. 21005, and to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith. Please send correspondence to: [X] Customer No. 21005 HAMILTON, BROOK, SMITH & REYNOLDS, P.C. Two Militia Drive Lexington, MA 02421-4799 or [] Address as follows: Direct telephone calls to: James M. Smith, Esq. Direct facsimiles to: James M. Smith, Esq. Telephone No.: 781-861-6240 Direct facsimiles to: James M. Smith, Esq. Facsimile No.: 781-861-9540 1 hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of fittle 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon. Full name of sole or first inventor Jeffrey P. Grossman Inventor's Signature Residence 63 Fulkerson Street Cambridge, Massachusetts 02141 Citizenship USA	(Application Serial No.	.)	(Filing date)	(Status: patented, pending, abandoned)
(Application Serial No.) (Filing date) (Status patented, pending, abandoned) As a named inventor, I hereby appoint the attorneys and/or agents associated with Hamilton, Brook, Smith & Reynolds, P.C., Two Militia Drive, Lexington, Massachusetts 02421-4799 Customer No. 21005, and to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith. Please send correspondence to: [X Customer No. 21005 HAMILTON, BROOK, SMITH & REYNOLDS, P.C. Two Militia Drive Lexington, MA 02421-4799 or [] Address as follows: Direct telephone calls to: James M. Smith, Esq. Telephone No.: 781-861-6240 Direct facsimiles to: James M. Smith, Esq. Facsimile No.: 781-861-9540 I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon. Full name of sole or first inventor Jeffrey P. Grossman Inventor's Signature Residence 63 Fulkerson Street Cambridge, Massachusetts 02141 Citizenship USA	(Application Serial No.	.)	(Filing date)	(Status: patented, pending, abandoned)
As a named inventor, I hereby appoint the attorneys and/or agents associated with Hamilton, Brook, Smith & Reynolds, P.C., Two Militia Drive, Lexington, Massachusetts 02421-4799 Customer No. 21005, and to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith. Please send correspondence to: [X] Customer No. 21005 HAMILTON, BROOK, SMITH & REYNOLDS, P.C. Two Militia Drive Lexington, MA 02421-4799 or [] Address as follows: Direct telephone calls to: James M. Smith, Esq. Telephone No.: 781-861-6240 Direct facsimiles to: James M. Smith, Esq. Facsimile No.: 781-861-9540 I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon. Full name of sole or first inventor Jeffrey P. Grossman Inventor's Signature Residence 63 Fulkerson Street Cambridge, Massachusetts 02141 Citizenship USA	(Application Serial No.	.)	(Filing date)	(Status: patented, pending, abandoned)
Hamilton, Brook, Smith & Reynolds, P.C., Two Militia Drive, Lexington, Massachusetts 02421-4799 Customer No. 21005, and	(Application Serial No.	.)	(Filing date)	(Status: patenæd, pending, abandoned)
to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith. Please send correspondence to: [X Customer No. 21005 HAMILTON, BROOK, SMITH & REYNOLDS, P.C. Two Millitia Drive Lexington, MA 02421-4799 or [] Address as follows: Direct telephone calls to: James M. Smith, Esq. Telephone No.: 781-861-6240 Direct facsimiles to: James M. Smith, Esq. Facsimile No.: 781-861-9540 I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon. Full name of sole or first inventor Jeffrey P. Grossman	Hamilton, Brook, Smi	ith & Reyn		
Please send correspondence to: [X Customer No. 21005 HAMILTON, BROOK, SMITH & REYNOLDS, P.C. Two Militia Drive Lexington, MA 02421-4799 or [] Address as follows: Direct telephone calls to: James M. Smith, Esq. Telephone No.: 781-861-6240 Direct facsimiles to: James M. Smith, Esq. Facsimile No.: 781-861-9540 I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon. Full name of sole or first inventor Jeffrey P. Grossman Inventor's Signature Date 10/59/01 Residence 63 Fulkerson Street Cambridge, Massachusetts 02141 Citizenship USA	and			
X Customer No. 21005 HAMILTON, BROOK, SMITH & REYNOLDS, P.C. Two Militia Drive Lexington, MA 02421-4799 Or	to prosecute this applic	ation and to	transact all business in t	he Patent and Trademark Office connected therewith.
HAMILTON, BROOK, SMITH & REYNOLDS, P.C. Two Militia Drive Lexington, MA 02421-4799 or [] Address as follows: Direct telephone calls to: James M. Smith, Esq. Telephone No.: 781-861-6240 Direct facsimiles to: James M. Smith, Esq. Facsimile No.: 781-861-9540 I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon. Full name of sole or first inventor Jeffrey P. Grossman Inventor's Signature Date 10/29/0	Please send corres	pondence to	:	·
Direct telephone calls to: James M. Smith, Esq. Telephone No.: 781-861-6240 Direct facsimiles to: James M. Smith, Esq. Facsimile No.: 781-861-9540 I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon. Full name of sole or first inventor Jeffrey P. Grossman Inventor's Signature Date 10/49/01 Residence 63 Fulkerson Street Cambridge, Massachusetts 02141 Citizenship USA		•	HAMILTON, BROOI Two Militia Drive	
Direct facsimiles to:	[] Address as fol	lows:		
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon. Full name of sole or first inventor Jeffrey P. Grossman Inventor's Signature 63 Fulkerson Street Cambridge, Massachusetts 02141 Citizenship USA	Direct telepho	ne calls to:	James M. Smith, Esq.	Telephone No.: 781-861-6240
on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon. Full name of sole or first inventor Jeffrey P. Grossman Inventor's Signature Marchael Date 10/49/0 Cambridge, Massachusetts 02141 Citizenship USA	Direct facsimi	les to:	James M. Smith, Esq.	Facsimile No.: 781-861-9540
or first inventor Jeffrey P. Grossman Inventor's Signature Date 10/29/01 Residence 63 Fulkerson Street Cambridge, Massachusetts 02141 Citizenship USA	on information and beli that willful false statem 1001 of Title 18 of the	ef are belied ents and the United State	ved to be true; and furthe like so made are punish es Code and that such wil	r that these statements were made with the knowledge able by fine or imprisonment, or both, under Section
Inventor's Signature Date 10/49/01 Residence 63 Fulkerson Street Cambridge, Massachusetts 02141 Citizenship USA	Full name of sole			
Residence	or first inventor	Jeffrey	P. Grossman	
Cambridge, Massachusetts 02141 CitizenshipUSA	Inventor's Signature	_W 2	renam	Date 10/29/01
Citizenship USA	Residence	63 Fulk	erson Street	
	-	Cambrio	lge, Massachusetts 0214	1
Mailing Address Same as above	Citizenship	USA		
Daile as above.	Mailing Address	Same as	above.	

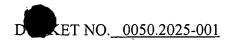
Full name of second jo	pint		
inventor, if any	Thomas F. Knight, Jr.		
Inventor's Signature		Date	
Residence	58 Douglas Road		
	Belmont, Massachusetts 02378		
Citizenship	USA		
Mailing Address	Same as above.		
Full name of third join	t		
inventor, if any	Jeremy H. Brown		
Residence	73 Newbury Street, #2		
	Somerville, Massachusetts 02144		
Citizenship	USA		
Mailing Address	Same as above.		
Full name of fourth joi	int		
inventor, if any	Andrew W. Huang		
Inventor's Signature		Date	
Residence	85 Pearl Street, B		
	Cambridge, Massachusetts 02139		
Citizenship	USA		
Mailing Address	Same as above.		
::ODMAWHODMA\iMana	ge;256497;1		



STATEMENT CLAIMING SMALL ENTITY STATUS (37 CFR 1.27(a))-NONPROFIT ORGANIZATION

DOCKET NUMBER: 0050.2025-001

	Machagiera to Paduce the C	ost of Forwarding Pointer Aliasing
'itle:		
hereby state t	that I am an official empowered to act on be	shalf of the nonprofit organization identified below
NAN	ME OF NONPROFIT ORGANIZATION	Massachusetts Institute of Technology S Combridge Center - Kendull Square
	RESS DI NONFROPTI DRGANIZATIO	Cambridge, MA 02142
1701: OF NO	NPROFULORGANIZATION:	
TALE OF MO		
[X]	UNIVERSITY OR OTHER INSTITUTIO	IN OF HIGHER EDUCATION APPLIED OF CALLE COMPARE COMPA
i j	TAX EXEMPT UNDER INTERNAL RE	VENUE SERVICE CODE (26 U.S.C.501(8) and 501(c)(3)) HONAL UNDER STATUTE OF STATE OF THE UNITED STATES OF AMERICA
()		INVAL UNDER STATE OF STATE OF THE CHARLES
	CUTATION OF STATISTE)
r 1	WOULD QUALIFY AS TAX EXEMPT	UNDER INTERNAL REVENUE SERVICE CODE (26 U.S.C. 501(a) and 501(c)(3)) IF
L 1	LOCATED IN THE UNITED STATES O	IF AMERICA
	WOULD OUALIFY AS NONPROFIT SO	CIENTIFIC OR EDUCATIONAL UNDER STATUTE OF STATE OF THE UNITED
	STATES OF AMERICA IF LOCATED I	N THE LINITED STATES OF AMERICA
£ 1 1	(NAME OF STATE	
, Fi	(CITA'TION OF STATUTE	
		fied above qualifies as a nunprofit organization as defined in 37 CFR 1.27(a)(3) for
incrent	y state that the nonprofit organization identi-	ent and Trademark Office regarding the invention described in:
	date to the current office the	and the state of t
望(x)	the specification filed herewith with title i	as listed abova.
	the application identified above.	
= [j	the patent identified above.	
identified inv invention mu a parson unde	ention. If the rights held by the nonprofit of	have been conveyed to and remain with the nonprofit organization regarding the above organization are not exclusive, each individual, concern, or organization having rights in the assemble small entities. No rights to the invention are hold by any person who would not qualify as ich would not qualify as ich would not qualify as ich would not qualify as a small business concern under 37 CFR 1.27(a)(2) or a nonprofit
<u>. </u>	Varian Burdanana	the in the imparion is listed below:
Lach D	erson, concorn, or organization having any no such person, concern, or organization	ngine in the invention is nated below.
[^]	each such person, concern, or organization	taisis.
1 1	each stiff briggit, collectif, or organization	ALL CONTRACT DESCRIPTION
status prior to	owledge the duty to file, in this application a paying, or at the time of paying, the earlie appropriate. (37 CFR 1.27(g)(2))	or patent, notification of any change in status resulting in less of entitlement to small entity est of the issue fee or any maintenance fee due after the date on which status as a small entity
NAME OF F	PERSON SIGNING	Rita Filipowicz
TITLE IN O	RGANIZATION OF PERSON SIGNING	Patent Administrator
	of Person Signing	77 Massachusetts Avenue, Cambridge, MA 02139
SIGNATUR	ii to my The	DATE 11/13/01
		1



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Declaration for Patent Application

As a named inventor, I hereby declare that:

My residence, mailing address and citizenship are as stated next to my name;

I believe I am the original, first and sole inventor (if only one name is listed) or an original, first and joint inventor (if plural names are listed in the signatory page(s) commencing at page 3 hereof) of the subject matter which is claimed and for which a patent is sought on the invention entitled

MECHANISM TO REDUCE THE COST OF FORWARDING POINTER ALIASING

the spe	cification of which (o	check one)									
[X]	is attached hereto.										
[]	was filed on as Unite			ites Application							
	Number or PCT In	ternational App	olication No)							
	and was amended				•						
includii	I hereby state that lang the claims, as ame					e-ider	itified s	speci	ificati	ion,	
	I acknowledge the including for continuate of the prior applition.	ation-in-part ap	plications,	material informa	tion which b	ecame	availa	ble b	etwe	en tl	
country any for	I hereby claim fore ent or inventor's certi to other than the Unite eign application for parties of the application for parties of the application for the application	ficate, or 365(a) od States of Amoratent or inventor) of any PC erica, listed or's certific	T international a below and have ate, or of any PC	pplication wi also identific	hich d ed bel	esignarow, by	teď a chec	t leas king	the l	oox,
₩÷.			Prior Fore	ign Application(<u>s)</u>	N	ority ot imed	C	Certi Copy ES	Filed	l? O
(Numb	er)	(Country)	<u>(</u> 1	Day/Month/Year	filed)	[]	[]	[]
(Numbe	er)	(Country)	<u>(1</u>	Day/Month/Year	filed)	[]	[]	[]
(Numbe	er)	(Country)	<u>(1</u>	Day/Month/Year	filed)	[]	[]	[]
I hereb	y claim the benefit u	nder 35 U.S.C.	§119(e) of	any United States	s provisional	appli	cation(s) lis	sted b	elow	.
(Applic	ation Number)			(Filing Date)							
Application Number)			_	(Filing Date)							

I hereby claim the benefit under 35 U.S.C. 120 of any United States application(s), or 365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. 112, I acknowledge the duty to disclose information known by me to be material to patentability as defined in 37 C.F.R. 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

60/299,244		June 19, 2001	Pending
(Application Serial No	p.)	(Filing date)	(Status: patented, pending, abandoned)
(Application Serial No	o.)	(Filing date)	(Status: patented, pending, abandoned)
(Application Serial No	o.)	(Filing date)	(Status: patented, pending, abandoned)
(Application Serial No	0.)	(Filing date)	(Status: patented, pending, abandoned)
	ith & Reynole		s and/or agents associated with Orive, Lexington, Massachusetts 02421-4799
and	·		,
to prosecute this applie	cation and to tr	ansact all business in th	ne Patent and Trademark Office connected therewith.
Please send corres	spondence to:		
[X] Customer No	I T	21005 HAMILTON, BROOK Iwo Militia Drive Lexington, MA 02421-	K, SMITH & REYNOLDS, P.C.
or	_		
[] Address as fo	llows:		
Direct telepho	one calls to: <u>J</u>	ames M. Smith, Esq.	Telephone No.: 781-861-6240
Direct facsim	iles to:J	ames M. Smith, Esq.	Facsimile No.: 781-861-9540
on information and be that willful false staten	lief are believe nents and the li United States	d to be true; and further ike so made are punisha Code and that such will	my own knowledge are true and that all statements made that these statements were made with the knowledge ble by fine or imprisonment, or both, under Section lful false statements may jeopardize the validity of the
Full name of sole			
or first inventor	Jeffrey P.	Grossman	
Inventor's Signature			Date
Residence	63 Fulker	son Street	
	Cambridg	e, Massachusetts 02141	
Citizenship	USA		<u> </u>
Mailing Address	Same as a	bove.	

Ī,	_
ij	_
Hi.	_
÷.,	-
ii.	7
Ī	1
E	
!	٥
-	€.
-	Ē
	=
	7114
-	£

Full name of second join	t		
inventor, if any	Thomas F. Knight, Jr.	1	
Inventor's Signature	Hous - My M	· 	Date <u>9/27/0/</u>
Residence	, , ,		
	Belmont, Massachusetts 02378		
Citizenship	USA		
Mailing Address	Same as above.		
Full name of third joint			
inventor, if any	Jeremy H. Brown	_	
<i>r</i>			Date 9/27/01
Residence	73 Newbury Street, #2-	7 Valentine 5x	
	Somerville, Massachusetts 02144.	Carby idas 1	NA (12139)
Citizenship			
Mailing Address	Same as above.		
Full name of fourth joint	ζ.		
inventor, if any	Andrew W. Huang		
Inventor's Signature	Au /		Date 9/27/6/.
Residence	/ 1		
	Cambridge, Massachusetts 02139		
Citizenship	USA		
Mailing Address	Same as above.		